```
"VARIABLE" "DESCRIPTION" "SAMPLE_TYPE" "UNITS" "RANGE_LOW"
     "RANGE HIGH" "LEGAL VALUES"
"AMPHNTAX" "No. of Amphipoda taxa"
                                    "BERWW"
                                                    0
"AMPHPIND" "% Amphipoda individuals" "BERWW"
                                               11 11
                                                          100
"AMPHPTAX" "% Amphipoda taxa" "BERWW" ""
                                                    100
"BENT_COM" "Comment on benthic sample" "BERWW"
                                               11 11
                                               11 11
"BURRNTAX" "No. of Burrowers taxa"
                                    "BERWW"
                                                    0
"BURRPIND" "% Burrowers individuals" "BERWW"
                                               11 11
                                                    0
                                                          100
"BURRPTAX" "% Burrowers taxa" "BERWW" ""
                                               0
                                                    100
"CHIRDOM1PIND" "% individuals in most abundant Chironomidae taxon"
     "BERWW"
               11 11
                    Ω
                         100
"BERWW"
            "" 0
                         100
"CHIRDOM5PIND" "% individuals in most abundant 5 Chironomidae taxa"
     "BERWW"
              11 11
                    0
                          100
"CHIRNTAX" "No. of Chironomidae taxa" "BERWW"
"CHIRPIND" "% Chironomidae individuals" "BERWW"
                                                          100
                                                    0
"CHIRPTAX" "% Chironomidae taxa" "BERWW" ""
                                                    100
"CLMBNTAX" "No. of Climbers taxa" "BERWW"
"CLMBPIND" "% Climbers individuals" "BERWW"
                                               11 11
                                                          100
"CLMBPTAX" "% Climbers taxa" "BERWW"
                                   "" 0
                                               100
"CLNGNTAX" "No. of Clingers taxa" "BERWW"
                                         11 11
"CLNGPIND" "% Clingers individuals" "BERWW"
                                               11 11
                                                    Ω
                                                          100
"CLNGPTAX" "% Clingers taxa" "BERWW" "" 0
"COFINTAX" "No. of Collecter-filterer taxa" "BERWW"
                                                          Λ
                                                         0
"COFIPIND" "% Collecter-filterer individuals" "BERWW"
                                                               100
"COFIPTAX" "% Collecter-filterer taxa" "BERWW"
                                                    0
                                                         100
"COFITRICNTAX" "No. of Collector-filterer Trichoptera taxa" "BERWW"
        0
"COFITRICPIND" "% Collector-filterer Trichoptera individuals"
     "BERWW"
              " " 0
                          100
"COFITRICPTAX"
               "% Collector-filterer Trichoptera taxa" "BERWW"
     Λ
          100
"COGANTAX" "No. of Collecter-gatherer taxa" "BERWW"
"COGAPIND" "% Collecter-gatherer individuals" "BERWW"
                                                    11 11
                                                         0
                                                               100
"COGAPTAX" "% Collecter-gatherer taxa" "BERWW"
                                                          100
                                                    0
"CRUSNTAX" "No. of Crustaceans taxa" "BERWW"
                                                    0
"CRUSPIND" "% Crustaceans individuals" "BERWW"
                                               11 11
                                                          100
"CRUSPTAX" "% Crustaceans taxa" "BERWW" ""
                                                    100
"DATE_BENT" "Date of actual benthic collection" "BERWW"
                                                          11 11
"DATE_COL" "Date of field collection"
"DIPTNTAX" "No. of Diptera taxa" "BERWW" ""
"DIPTPIND" "% Diptera individuals" "BERWW"
                                               11 11
                                                    0
                                                          100
                                   "" 0
"DIPTPTAX" "% Diptera taxa" "BERWW"
"DOM1PIND" "% individuals in dominant taxon, without regard to
               "BERWW" ""
                             0
distinctness"
                                   100
"DOM3PIND" "% individuals in dominant 3 taxa, without regard to
distinctness" "BERWW" "" 0
                                   100
```

```
"DOM5PIND" "% individuals in dominant 5 taxa, without regard to
distinctness" "BERWW" "" 0
                                     100
"EPHENTAX" "No. of Ephemeroptera taxa" "BERWW"
                                                     " " 0
"EPHEPIND" "% Ephemeroptera individuals" "BERWW"
                                                                100
"EPHEPTAX" "% Ephemeroptera taxa" "BERWW"
"EPOTNTAX" "No. of Ephemeroptera, Plecoptera, Odonata, & Trichoptera
taxa" "BERWW" ""
"EPOTPIND" "% Ephemeroptera, Plecoptera, Odonata, & Trichoptera
individuals" "BERWW" "" 0
                                     100
"EPOTPTAX" "% Ephemeroptera, Plecoptera, Odonata, & Trichoptera taxa"
     "BERWW" "" 0
                          100
"EPT_NTAX" "No. of EPT taxa""BERWW"
"EPT_PIND" "% EPT individuals" "BERWW"
                                           11 11
                                                      100
"EPT PTAX" "% EPT taxa" "BERWW" ""
                                                100
                                           0
"FACLNTAX" "No. of Facultative (PTV>=4 and PTV<6) taxa" "BERWW"
     0
"FACLPIND" "% Facultative (PTV>=4 and PTV<6) individuals"
                100
"FACLPTAX" "% Facultative (PTV>=4 and PTV<6) taxa" "BERWW"
     100
"FW_ECO3" "Three climatic regions of the US used in WSA in indicator
development: Eastern Highlands, West, and Plains and Lowlands"
"FW_ECO9"
          "Aggregated level 3 ecoregions used in WSA"
"GREAT RIVER" "Great river site"
"HEMINTAX" "No. of Hemiptera taxa"
                                    "BERWW"
"HEMIPIND" "% Hemiptera individuals" "BERWW"
                                                      Ω
                                                           100
"HEMIPTAX" "% Hemiptera taxa" "BERWW" ""
                                                0
                                                      100
"HPRIME" "Shannon diversity- sum of prop_i*ln(prop_i) based only on
distinct taxa" "BERWW" ""
"INTLNTAX" "No. of Intolerant (PTV<4) taxa" "BERWW"
                                                           0
                                                                100
"INTLPIND" "% Intolerant (PTV<4) individuals" "BERWW"
                                                           Ω
"INTLPTAX" "% Intolerant (PTV<4) taxa" "BERWW"
                                                           100
"MITENTAX" "No. of Mite taxa"
                               "BERWW" ""
"MITEPIND" "% Mite individuals" "BERWW"
                                                0
                                                      100
"MITEPTAX" "% Mite taxa" "BERWW" ""
                                                100
"MOLLNTAX" "No. of Mollusca taxa" "BERWW"
"MOLLPIND" "% Mollusca individuals" "BERWW"
                                                11 11
                                                           100
                                     "" 0
"MOLLPTAX" "% Mollusca taxa" "BERWW"
                                                100
"NOINNTAX" "No. of Non-insects taxa" "BERWW"
                                                11 11
                                                      Λ
"NOINPIND" "% Non-insects individuals" "BERWW"
                                                11 11
                                                      0
                                                           100
"NOINPTAX" "% Non-insects taxa" "BERWW" ""
                                                0
                                                      100
                                                           11 11
"NTOLNTAX" "No. of non-tolerants (PTV<6) taxa"
                                                "BERWW"
                                                                 0
"NTOLPIND" "% non-tolerants (PTV<6) individuals"
                                                                 0
                                               "BERWW"
     100
"NTOLPTAX" "% non-tolerants (PTV<6) taxa"
                                                           0
                                                                100
                                         "BERWW"
"ODONNTAX" "No. of Odonata taxa" "BERWW" ""
"ODONPIND" "% Odonata individuals" "BERWW"
                                                11 11
                                                           100
```

```
"ODONPTAX" "% Odonata taxa" "BERWW" "" 0
                                                  100
"OLLENTAX" "No. of Oligochaete and leech taxa"
                                                 "BERWW"
"OLLEPIND" "% Oligochaete and leech individuals" "BERWW"
                                                                   0
     100
"OLLEPTAX" "% Oligochaete and leech taxa" "BERWW"
                                                       11 11
                                                              0
                                                                   100
"ORTHCHIRPIND"
              "% Chironomidae individuals in Orthocladiinae"
     "BERWW" ""
                     Ω
                           100
"ORTHNTAX" "No. of Orthocladiinae chironomid taxa" "BERWW"
                                                                   0
"ORTHPIND" "% Orthocladiinae chironomid individuals"
                                                       "BERWW"
          100
     0
"ORTHPTAX" "% Orthocladiinae chironomid taxa" "BERWW"
                                                        " " 0
                                                                   100
"PLECNTAX" "No. of Plecoptera taxa"
                                       "BERWW"
"PLECPIND" "% Plecoptera individuals" "BERWW"
                                                        0
                                                              100
"PLECPTAX" "% Plecoptera taxa" "BERWW" ""
                                                  0
                                                        100
"PREDNTAX" "No. of Predators taxa" "BERWW"
                                                  11 11
                                                        Ω
"PREDPIND" "% Predators individuals"
                                       "BERWW"
                                                  11 11
                                                              100
"PREDPTAX" "% Predators taxa" "BERWW" ""
                                                  0
                                                        100
"SAMPLE_CAT" "Sample category (Primary/Duplicate/Filter blank)"
"SAMPLE_TYPE" "Sample type"
"SCRPNTAX" "No. of Scrapers taxa" "BERWW" ""
"SCRPPIND" "% Scrapers individuals" "BERWW"
                                                  11 11
                                                              100
                                       11 11
"SCRPPTAX" "% Scrapers taxa" "BERWW"
                                            0
                                                  100
"SHRDNTAX" "No. of Shredders taxa"
                                     "BERWW"
                                                  11 11
                                                        0
"SHRDPIND" "% Shredders individuals" "BERWW"
                                                  11 11
                                                        Ω
                                                              100
"SHRDPTAX" "% Shredders taxa" "BERWW" ""
                                                        100
"SITE_CLASS" "Site class (NAWQA, PROB, HAND)"
"SITE ID" "Site identification code"
"SPWLNTAX" "No. of Sprawlers taxa" "BERWW" "SPWLPIND" "% Sprawlers individuals" "BERWW"
                                                  11 11
                                                        0
                                                  11 11
                                                        0
                                                              100
"SPWLPTAX" "% Sprawlers taxa" "BERWW" ""
                                                        100
"STOLNTAX" "No. of taxa with PTV>=8" "BERWW"
                                                        Λ
"STOLPIND" "% Individuals with PTV>=8" "BERWW"
                                                  11 11
                                                        0
                                                              100
"STOLPTAX" "% taxa with PTV>=8" "BERWW" ""
                                                  0
                                                        100
"STRAHLERORDER" "Strahler stream order from RF3 stream data"
"SWIMNTAX" "No. of Swimmers taxa" "BERWW"
"SWIMPIND" "% Swimmers individuals" "BERWW"
                                                  11 11
                                                        0
                                                              100
"SWIMPTAX" "% Swimmers taxa""BERWW"
                                       " " 0
                                                  100
"TANYNTAX" "No. of Tanytarsini taxa"
                                                  11 11
                                                        0
                                       "BERWW"
                                                  11 11
"TANYPIND" "% Tanytarsini individuals" "BERWW"
                                                              100
                                                        0
"TANYPTAX" "% Tanytarsini taxa" "BERWW" ""
                                                        100
                                       "BERWW"
"TL01NTAX" "No. of taxa with PTV<2"
                                                  11 11
                                                        0
"TL01PIND" "% Individuals with PTV <2" "BERWW"
                                                  11 11
                                                        0
                                                              100
"TL01PTAX" "% taxa with PTV<2"
                               "BERWW" ""
                                                  0
                                                        100
"TL23NTAX" "No. taxa with PTV >=2 & <4" "BERWW"
                                                        11 11
"TL23PIND" "% individuals with PTV >=2 & <4" "BERWW"
                                                              0
                                                                   100
"TL23PTAX" "% taxa with PTV>=2 & <4" "BERWW"
                                                              100
```

```
"TL45NTAX" "No. taxa with PTV >=4 & <6" "BERWW" ""
                                                    "" 0
"TL45PIND" "% individuals with PTV >=4 & <6" "BERWW"
                                                               100
"TL45PTAX" "% taxa with PTV>=4 & <6" "BERWW"
                                                     0
                                                          100
"TL67NTAX" "No. taxa with PTV >=6 & <8" "BERWW"
                                                     11 11
"TL67PIND" "% individuals with PTV >=6 & <8" "BERWW"
                                                          0
                                                               100
"TL67PTAX" "% taxa with PTV>=6 & <8" "BERWW" ""
                                                          100
"TOLRNTAX" "No. of Tolerant (PTV>=6) taxa" "BERWW"
                                                          0
"TOLRPIND" "% Tolerant (PTV>=6) individuals" "BERWW"
                                                          0
                                                               100
"TOLRPTAX" "% Tolerant (PTV>=6) taxa" "BERWW"
                                                     0
                                                          100
                                                    11 11
"TOTLNIND" "Number of individuals in sample" "BERWW"
                                                          0
"TOTLNTAX" "Number of distinct taxa in sample"
                                              "BERWW"
                                                          11 11
"TRICNTAX" "No. of Trichoptera taxa" "BERWW"
                                               11 11
"TRICPIND" "% Trichoptera individuals" "BERWW"
                                              11 11
                                                     0
                                                          100
"TRICPTAX" "% Trichoptera taxa" "BERWW" "" 0
                                                    100
"TUBINAIDNTAX" "No. of Tubificidae and Naididae taxa" "BERWW"
"TUBINAIDPIND" "% Tubificidae and Naididae individuals"
                                                         "BERWW"
     " " 0
              100
"TUBINAIDPTAX" "% Tubificidae and Naididae taxa" "BERWW" "" 0
     100
"UID" "Unique site visit ID"
"VISIT NO" "Visit number for that year"
"WTD_TV" "HBI, or sum of TV_i*prop_i, with proportions based only on
taxa with PTVs" "BERWW" ""
                              0
"YEAR" "Sampling year"
```